

Taro Kumagai

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Education

California State University Expected 2027

Major: MS Computer Science | **Current GPA: 4.0**

DigiPen Institute of Technology 2023

Major: BS Computer Science & Game Design | **GPA: 3.6**

University of California, Santa Cruz 2016

Major: BS Chemistry

Skills & abilities

Proficient: C, C#, C++

Coursework/Exposure: Python, Java, RISC-V, SML

Software: Visual Studio, VS Code, Unity, Unreal, GitHub, Tortoise SVN, Jira, Trello

CS Concepts: Object-Oriented Programming, Data Structures & Algorithms, Pathfinding, Code Review, Debugging, Version Control, Event Driven Programming, Game AI (FSMs & Behavior Trees), Audio Programming (FMod/Wwise API), ImGui, Game Engine Architecture, Physics & Collisions, Time Complexity, SDLC

Soft Skills: Cross-Disciplinary Communication, Technical Sales, Waterfall/Agile/Scrum familiarity, Timeline & Deliverables Tracking

Languages: English, Japanese

CS/Game Project Experience

Custom NavMesh Generator Jan 2023 – Apr 2023

DigiPen Institute of Technology | Unity Engine | C#

- Developed **custom 2D NavMesh Generation tool in Unity** enabling **AI agents** to accurately differentiate walkable terrain and obstacles in a single click.
- **Implemented A* pathfinding** agents that could navigate paths from the generated **NavMesh**.
- Designed and built NavMesh **debugging tools** to visualize obstacles, agent pathways, terrain boundaries, and traversable areas.

UI & Generalist Programmer | Grocery Gauntlet (3D Party Game) Sep 2022 – Jan 2023

DigiPen Institute of Technology | Unreal Engine | Unreal Blueprints | C++

- **Collaborated with a UI designer** to implement and revamp game UI menus, reducing user errors and improving navigation, leading to a less frustrating and more enjoyable experience
- Implemented player stat tracking to display detailed gameplay data.
- Developed and integrated seamless **UI controls for both gamepad and keyboard** increasing accessibility for players who prefer either control scheme.

AI & Audio Programmer | Runes of Legacy (Top-Down Action Game) Sep 2021 – May 2022
DigiPen Institute of Technology | Unity Engine | C#

- Developed enemy **AI behaviors using finite state machines (FSMs)** creating dynamically unique behaving enemies.
- Constructed **custom inspector features to enhance collaboration with game designers** to make adjustments to **FSMs** without the need for scripting.
- **Collaborated with an Audio Designer** to integrate game audio features using the **Wwise API** in **Unity**.

Tech Lead | IronVale Grove (2D Tug-of-War Strategy Game) Sep 2020 – Apr 2021
DigiPen Institute of Technology | Custom C++ Game Engine

- **Constructed a custom C++ game engine**, enabling integration of work from both technical and non-technical staff
- **Developed game engine editor features using Dear ImGui**, ensuring accessibility for both technical and non-technical team members.
- Integrated **FMOD API** for audio implementation, **collaborating with the Audio Designer** to incorporate SFX and music into the game engine.
- **Led and managed technical team**: Assigned tasks to programmers, conducted **code reviews**, facilitated pairs for **pair programming**, and provided support to manage repository in Tortoise SVN.

Work Experience

Ramp Supervisor Sep 2023 – Feb 2025
GAT Airline Ground Support

- Assigned tasks to ramp agents to efficiently service inbound and outbound flights.
- Operated pushback tractor to safely position aircraft for departure or storage.
- Performed essential ramp services, including aircraft cleaning, baggage handling, and marshaling planes in and out of gates.
- Ensured ramp operations were conducted in a safe and efficient manner adhering to aviation and company regulations.

Gameplay & Audio Programmer (Volunteer) Oct 2023 – Feb 2024
Games for Love

- Assisted in development of minimum viable product (MVP) build for Flight of the Fluffle
- **Implemented soft platform collision detection**, enhancing game feel and improving player experience.
- **Collaborated with an Audio Designer** to integrate and implement SFX and music **using FMOD Studio/API**.

Sales Engineer Oct 2016 – Aug 2017
Enplas Microtech Inc.

- Liaised between clients and the engineering team in Japan to coordinate the development of microfluidic products.
- Assisted in the production and prototyping of microfluidic plastic components.
- Conducted examinations and troubleshooting of microfluidic plastic products to identify and resolve defects.
- Facilitated design reviews with customers, providing recommendations to improve manufacturability.